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Weapon Injury Data

GOVERNMENT DOCUMENTS

Notes from the Weapon-Related Injury Surveillance System

March 2000

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Weapon-Related Injuries

Reported by Hospital Emergency Departments

This bulletin briefly summarizes gunshot wound (GSW) and sharp instrument wound (SIW) data collected by the Massachusetts Department of Public Health's Weapon-Related Injury Surveillance System (WRISS) on injuries treated by hospital emergency departments during 1998.

The overall number of gunshot and sharp instrument wounds reported to WRISS, among Massachusetts residents, decreased statewide from 1,897 in 1997 to 1,773 in 1998; a statistically significant decline of 7% ($p<0.05$). Table 1 provides an overview of injuries reported to WRISS over a five year period by intentionality of the injury (violence, accidental, etc.) and the type of weapon involved. Violence-related gunshot and sharp instrument wounds declined dramatically from 1994 to 1998; (52% and 34% respectively).

Table 2 provides the number of violence-related injuries reported in 1998, with increases and decreases noted among specific population groupings and cities and towns.

Notes

Based on record reviews conducted from 1994-1996, hospitals report approximately 70-80% of reportable cases. Numbers and rates provided here are not adjusted for hospital underreporting. Pre-hospital deaths are not captured by the system. Rates are based on 1997 population data estimates developed by the Massachusetts Institute for Social and Economic Research.

Table 1. Number of Injuries Treated by Massachusetts Emergency Departments for Gunshot and Sharp Instrument Wounds, 1994-98

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	Number of Cases Reported by Year					Rates
	1994	1995	1996	1997	1998	1998
Massachusetts Residents:						
Violence-Related Sharp Instrument Wounds	1885	1684	1553	1353	1253	20.1
Violence-Related Gunshot Wounds	662	526	393	312	318	5.1
Firearms	623	500	337	269	290	4.7
Nonpowder guns	37	20	43	25	20	0.3
Unknown gun type	2	6	13	18	8	0.1
Total Violence-Related Cases	*2547*	*2210*	*1946*	*1665*	*1571*	*25.2*
Accidental Gunshot Wounds	163	155	166	158	117	1.9
Firearms	69	65	55	56	44	0.7
Nonpowder guns	92	86	108	96	71	1.1
Unknown gun type	2	4	3	6	2	0.0
Self-Inflicted Gunshot Wounds	47	47	35	26	31	0.5
Firearms	44	43	32	22	30	0.5
Nonpowder guns	3	3	3	3	1	0.0
Unknown gun type	0	1	0	1	0	0.0
Unspecified Gunshot Wounds	108	100	72	48	54	0.9
Total Other Cases	*318*	*302*	*273*	*232*	*202*	*3.2*
Total Massachusetts Residents	**2865**	**2512**	**2219**	**1897**	**1773**	**28.5**
Total Out-of-State Residents	**63**	**53**	**53**	**50**	**43**	
Total Cases	**2928**	**2565**	**2272**	**1947**	**1861**	

NOTES: Rates are per 100,000 population based on 1997 population data estimates developed by the Massachusetts Institute for Social and Economic Research. Based on reviews from 1994-1996, hospitals report approximately 70-80% of reportable cases. Rates are not adjusted for hospital underreporting.

Impact Assessment

The Massachusetts Gun Control Act of 1998 (Chapter 180) became effective in October of the same year. This law changes the requirements for the purchase, possession, storage and licensing of firearms. Key provisions include the installment of trigger locks on all new handguns, a mandate requiring safe storage of all guns, a ban on the sale of "junk guns" and assault weapons, stricter licensing standards and background checks, increasing the age of eligibility for obtaining a license from 18 to 21 years, and requiring a safety training course for new license applicants.

WRISS data will provide one measure of the impact of this law on firearm-related injuries in Massachusetts. Our assessment, however, is dependent on the data reported to us by hospital emergency departments. For this reason, it is essential that ED's continue to report all potential cases, and that data are up to date, and complete. We appreciate your hospital's continued commitment.

To read the full text of the Massachusetts Gun Control Act of 1998, click on:[www.state.ma.us/legis/laws/seslaw98/SL980180.htm].

Massachusetts Department of Public Health◆Bureau of Health Statistics, Research & Evaluation◆250 Washington St., 6th Flr.◆Boston, MA 02108

Table 2. Violence-Related Gunshot and Sharp Instrument Wounds

1998 Cases Reported by Massachusetts Hospital Emergency Departments to the Mass. Dept. of Public Health

Patient's City	'97 Population	1998 Cases	'98 Rate/ 100,000
Group 1: Towns over 175,000 population:			
Boston	559,379	467	83.5
Group 1 Total:	*559,379*	*467*	*83.5*
Group 2: Towns 75,000-175,000 population:			
Brockton	89,121	84	94.3
Cambridge	96,423	22	22.8
Fall River	88,313	37	41.9
Lowell	104,418	48	46.0
Lynn	83,295	37	44.4
New Bedford	95,057	50	52.6
Newton	90,464	0	0.0
Quincy	86,256	17	19.7
Somerville	77,302	15	19.4
Springfield	148,178	102	68.8
Worcester	167,507	84	50.1
Group 2 Total:	*1,126,334*	*496*	*44.0*
Group 3: Towns 50,000-75,000 population:			
Brookline	58,906	4	6.8
Chicopee	54,378	10	18.4
Framingham	65,733	11	16.7
Haverhill	55,506	18	32.4
Lawrence	69,802	73	104.6
Malden	52,701	15	28.5
Medford	57,295	14	24.4
Plymouth	50,196	4	8.0
Taunton	53,046	15	28.3
Waltham	58,011	8	13.8
Weymouth	53,222	6	11.3
Group 3 Total:	*628,796*	*178*	*28.3*
Group 4: Towns 25,000-50,000 population:			
Agawam	29,045	2	6.9
Amherst	40,597	2	4.9
Andover	31,664	1	3.2
Arlington	42,809	4	9.3
Attleboro	39,739	8	20.1
Barnstable	45,748	3	6.6
Belmont	25,902	1	3.9
Beverly	39,549	5	12.6
Billerica	39,211	1	2.6
Braintree	34,347	5	14.6
Bridgewater	25,362	1	3.9
Burlington	25,192	1	4.0
Chelmsford	34,618	0	0.0
Chelsea	28,996	34	117.3
Danvers	25,564	2	7.8
Dartmouth	30,714	1	3.3
Dracut	28,473	1	3.5
Everett	36,476	14	38.4
Falmouth	29,188	5	17.1
Fitchburg	40,300	9	22.3
Franklin	27,979	1	3.6
Gloucester	29,288	6	20.5
Holyoke	41,194	36	87.4
Leominster	41,110	4	9.7
Lexington	31,395	0	0.0
Marlborough	33,801	7	20.7
Melrose	25,808	2	7.7
Methuen	41,467	10	24.1
Milton	26,377	3	11.4
Natick	31,466	3	9.5
Needham	27,717	0	0.0
N. Andover	25,527	1	3.9
continued (Group 4):			
N. Attleboro	26,442	0	0.0
Northampton	29,739	0	0.0
Norwood	28,863	0	0.0
Peabody	49,995	3	6.0
Pittsfield	47,050	9	19.1
Randolph	31,626	6	19.0
Revere	41,905	32	76.4
Salem	38,974	4	10.3
Saugus	25,412	3	11.8
Shrewsbury	28,224	2	7.1
Stoughton	28,651	1	3.5
Tewksbury	29,371	4	13.6
Watertown	31,572	2	6.3
Wellesley	28,353	0	0.0
W. Springfield	28,507	3	10.5
Westfield	40,446	5	12.4
Woburn	36,890	0	0.0
Group 4 Total:	*1,628,643*	*247*	*15.2*
Group 5: Towns under 25,000 population:*			
Group 5 Total:	*2,284,470*	*118*	*5.2*
Massachusetts:			
Statewide Total:	*6,227,622*	*1,571*	*25.2*

*Towns under 25,000 population are not separately listed because low case incidence and small population result in unstable rates. The Massachusetts total includes cases with unknown city (65 cases in 1998).

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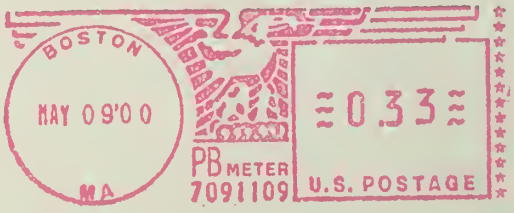

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